

(19)

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Office européen des brevets



(11)

EP 0 788 327 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
25.07.2001 Bulletin 2001/30

(21) Application number: 95937431.5

(22) Date of filing: 03.10.1995

(51) Int Cl.7: **A47L 13/18**

(86) International application number:
PCT/US95/13123

(87) International publication number:
WO 96/10356 (11.04.1996 Gazette 1996/16)

(54) **CLEAN UP DEVICE WITH CLOSURES**

REINIGUNGSVORRICHTUNG MIT VERSCHLÜSSEN

DISPOSITIF DE NETTOYAGE POURVU DE FERMETURES

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL
PT SE

(30) Priority: 03.10.1994 US 316357

(43) Date of publication of application:
13.08.1997 Bulletin 1997/33

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Description

[0001] This invention relates to clean up devices and methods, and more particularly to a device and method for cleaning up hazardous, infectious or toxic wastes. More particularly, this invention relates to clean up devices having various closure structures and their respective methods of use.

[0002] U.S. Patent No. 4,964,188 to Olson, entitled "Clean Up Device", (the entire disclosure of which is hereby incorporated herein by reference) discloses a clean up device which includes a glove which is heat-sealed to the inside of a plastic bag. The plastic bag is used to pick up waste, and in particular animal excrement. The clean up device permits the excrement to be easily picked up and disposed of. The glove prevents the bag from slipping around on the hand. Further, the outside of the bag has padded material mounted to the surface of the bag. This padding material absorbs any moisture contained in the excrement so that the excrement does not slip when the user is picking it up. Further, the padding serves as an insulator so that the user does not feel the texture or heat of the excrement.

[0003] U.S. Patent No. 5,301,806, also to Olson, entitled "Clean Up Device With Cut Resistant Layer", (the entire disclosure of which is also hereby incorporated herein by reference), discloses a plastic clean up bag that has a plastic glove which is heat sealed to one interior side of the bag. The glove has two thumbs so that it may be easily used by either left handed or right handed individuals. The bag is further provided with a cut-resistant fabric and has a padding of fibrous material on the outside of the bag which absorbs any liquid surrounding or contained in the waste to be picked up. The bag also has a draw string closure on the top and which may be pulled from either side. The bag is turned inside out once the waste has been cleaned up, and the draw strings are used to close the bag for disposal purposes.

[0004] The present invention is a further development of the devices disclosed in these Olson '188 and '806 Patents. The invention is particularly adapted for cleaning up hazardous, infectious or toxic wastes and, particularly, discloses further absorbent materials that may be incorporated into the device structures. Further, additional closing structures are taught which may be used with the devices of the Olson '188 and '806 Patents to close the respective bags for disposal.

SUMMARY OF THE INVENTION

[0005] According to the present invention, there is provided a clean up device to be worn on the hand of a user to clean up a spilled material, said clean up device comprising:

a flexible bag having a generally open top and an exterior surface, having opposing interior sides defining an interior recess adapted to receive the hand

of the user;

a pad attached to an exterior surface of said bag a glove member for receiving the hand of a user and joined to one interior side of said bag;

a closure mechanism located on the top of the bag for closing said generally open top of said flexible bag after the hand of the user has been removed from said interior recess and said flexible bag has been inverted;

characterised in that the glove member comprises a single sheet member joined to said one of the interior sides of the bag along sealing lines an interior side of the bag and the single sheet member forming a mitt area for receiving said user's hand.

BRIEF DESCRIPTION OF DRAWINGS

[0006]

Figure 1 is a schematic view of the clean up bag useful in explaining the present invention;

Figure 2 is a schematic view of the clean up bag of Figure 1, being turned inside out;

Figure 3 is a cross-sectional view of the top of the clean up bag of Figure 1;

Figure 4 is a schematic view of the clean up bag after it has been turned inside out;

Figure 5 is a schematic view of another example of a clean up bag useful in explaining the present invention;

Figure 6 is a cross-sectional view of the top of the clean up bag of Figure 5;

Figure 7 is a schematic view of another example of a clean up bag useful in explaining the present invention and showing an alternative closing structure;

Figure 8 is a schematic view of another example of a clean up bag useful in explaining the present invention;

Figure 9 is a schematic view of another example of a clean up bag useful in explaining the present invention;

Figure 10 is a schematic view of another example of a clean up bag useful in explaining the present invention;

Figure 11 is a schematic view of another example of a clean up bag useful in explaining the present invention;

Figure 12 is a plan view of another example of a clean up bag useful in explaining the present invention;

Figure 13 is a schematic view of another example of a clean up bag useful in explaining the present invention;

Figure 14 shows the process steps of using the clean up bag of the invention;

Figures 15 and 16 are plan views showing the

printing on the clean up bag of the invention when used for infectious or biohazardous waste; and **Figures 17 and 18** are perspective views taken from the top showing embodiments of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0007] Referring to **Figure 1**, this shows a clean up device 10 being constructed of a bag portion 12 and a glove portion 14 for use in the clean up and disposing of toxic, hazardous, or infectious waste (not shown).

[0008] Preferably, the glove 14 is sized and shaped to receive an adult's hand and has two thumbs 16 so that the glove 14 may be used by either left handed or right handed individuals. However, a one-handed glove (i.e. either right or left) will also work well. In the preferred embodiment, the glove 14 is constructed of a heat-sealable plastic material, however, those skilled in the art will readily recognize that other materials may be used within the purview of this invention.

[0009] The bag 12 is generally rectangular in shape and sized to receive the glove 14. In this example, the bag 12 is constructed from heat-sealable plastic, similar to that from which the glove 14 is constructed. Preferably, the plastic utilized is opaque so that when the bag is turned inside out, the contents are not visible. Those skilled in the art will appreciate that alternative materials may be used.

[0010] The bag 12 has a top 18 and a bottom 20 and two opposite sides 22 and 24. Optionally, the bag 12 may include pleats (not shown), one pleat positioned on each side 22 and 24, and extending longitudinally from the top 18 of the bag 12 to the bottom 20 of the bag 12. Such optional pleats allow the bag 12 to be easily turned inside out so that the waste is easily contained in the interior of the clean up device 10.

[0011] Further, the bag 12 is shown to have a gathering Type cord arrangement 30 which may be pulled from either side of the bag 12 to secure the contents of the inside of the bag 12.

[0012] The gathering arrangement 30, as shown, consists of a first 32 and a second 34 draw string cord. Both draw string cords 32 and 34 are located in a sleeve 36 positioned along the top 18 of the bag 12. The sleeve 36 is formed by folding over a small portion of the bag 12 near the top 18 and heat sealing the folded edge to thereby form the sleeve 36. The draw string cords 32 and 34 are both placed in the sleeve 36 so that the first cord 32 may be drawn closed from side 22 of the bag while the second cord 34 may be drawn closed from side 24 of the bag 12.

[0013] As shown in **Figure 3**, the bag 12 may include a plastic bag 15 which is covered with a cut-resistant material 50, such as Kevlar™. Material 50 is preferably fastened to the plastic bag 15 with an adhesive, and covers the entire outside surface of the plastic bag 15 to prevent puncture of the bag 12 by glass or needles or

other sharp objects. Layered over material 50 is an absorbent towel material 52 (attached by adhesive), which is shown covering the entire surface of material 50 but optionally need only cover selected portions of the material 50, such as the surface of material 50 on the side 38 opposite the inside surface of the bag 15 to which the glove 14 is attached. Towel material 52 is preferably a corrugated cotton fabric which is often used in hospital settings; however, it will be appreciated by those skilled in the art that any type of absorbent material may be used. Towel material 52 is used to absorb any liquid surrounding or contained in the waste.

[0014] Optionally, as shown in **Figures 5 and 6**, a pad 54 is attached by adhesive or stitching to the towel material 52 on side 38 of the bag 12. The pad 54 or other such absorbent pad is preferably gauze for medical applications, and is attached to provide additional absorbency. Preferably, pad 54 may be a 4"x4" or 4"x6" (or larger) surgical gauze positioned into the approximate center of the bag side 38 for added absorbency of open wounds or used in direct surgical procedures where fluids and/or blood needs to be absorbed quickly. Optionally, the gauze 54 (or towel material 52) can be premedicated (substance 56, such as a medication or disinfectant), pre-sterilized, pre-sanitized, etc., and already packaged in that manner, ready to off-set possible infection at the clean-up site when the bag 12 with gauze 54 is applied. In addition, due to the increased absorbency, a disinfectant or sanitizing solution could be applied directly to the gauze insert 54 during use and then applied to the area or open wound for infection control. The absorbent towel layer 52 or pad 54 may be impregnated or soaked or covered with a cleaning material such as a solvent, in the case of use of the bag 12 to clean up a toxic waste. Also, the pad 54 may be adapted for special functions such as for scrubbing a surface containing a toxic, hazardous or infectious waste.

[0015] The clean up device 10 is preferably constructed by heat sealing the plastic glove 14 to one interior side 42 of the bag 12. In operation, the user places his or her hand inside the plastic glove 14 which is located on the inside 42 of the plastic bag 12. The user then grasps the inside of the bag 12 and uses the glove 14 to control the movement of the outside surface of the bag 12 for cleaning, or to grasp objects such as sharp materials or other hazardous or infectious objects to be disposed of. The device 10 may be used to clean up liquids, blood, mucus, sinews, body parts, feces and other various spilled substances required to be cleaned up in and around a hospital, nursing home, clinic, day care, home care/nursing or used in any medical emergency situation. The paper toweling material 52 is optionally strong enough to permit it to be moistened first and applied to the area(s) for intended clean-up, if desired. Soap, disinfectants, sterilizing solutions can be applied to the paper toweling material 52 and/or pad 54 first for easier clean up or, it can be used in a dry format, for easy absorbency. The towel material 52 and/or

gauze 54 absorbs moisture and, thus, aids in gripping objects and allows for spills or blood to be cleaned up. Further, the padding 40 prevents the user from feeling the texture and heat content of the waste, if such is present. Optionally, a pad 54 or the towel material 52 may be of a heat resistant material to allow for the handling of hot objects or like materials.

[0016] After the user has picked up or wiped up the waste, the user may use the other hand to turn the plastic bag 12 inside out (Figure 4). When the bag 12 is turned inside out, the user can then remove his or her hand from the plastic glove 14 and grasp both ends of the draw strings 32 and 34 and tighten them to close the bag 12. Thus, when complete, the waste is contained in the interior of the bag 12. The present invention thus has applications in medical, industrial and household cleaning areas. While it is contemplated that the invention is best used as a disposable product, in some cases the bag 12 and paper toweling material 52 may be rinsed out, hung to dry, and re-used several times. As another alternative, the bag 12 can have a layer of linen or cotton absorbent material instead of the paper toweling material 52 and, thus, may be re-used repeatedly until the plastic bag 12 starts to show signs of wear, at which time, it may be turned inside out and permanently discarded.

[0017] Figure 7 shows an adhesive closure structure 25 positioned along the top 18 of the bag 12. The closure 25 is comprised of a strip of double-backed adhesive or tape 26 that is shown mounted or affixed to the original exterior side at the top 18 of the bag 12. Optionally, a strip of adhesive may be directly applied to the top of the bag. When the bag 12 is turned inside-out, the protective strip or release liner 27 on the tape 26 is readily available to be removed so that the top 18 of the bag 12 can be turned or rolled over once and sealed with the exposed adhesive surface 26. The corners of the bag 12 are die-cut in such a way that a right angle is provided at each edge 23. The right angles provide added protection from leakage when the strip of adhesive 26 is applied with the proper pressure-sensitive procedure at the time of closing. Utilizing this adhesive closure structure 25 and with proper and careful sealing, a leak resistant closure is provided for the bags of this invention. However, as known, certain caveats relating to the use of the bag 12 for infectious, toxic, or contaminated wastes always remain.

[0018] Figure 8 shows a Ziploc® type closure 28 wherein an elongated channel 29 is provided on one side of the bag top 18 and a cooperating elongated ridge on the opposite bag top. Similarly, a Gripper® zipper type closure may be used wherein small teeth, not discernible to the naked eye, interlock along opposing sides of the top 18 of the bag 12 when it is sealed. Closure of the bag 12 is obtained by sealing the opposing sides of the closure structure 28 when pressure is applied between the thumb and forefinger to the respective sides. This pressure between the thumb and forefinger

is applied from one end of the top 18 of the bag closure to the other. The Ziploc® type closure provides a nearly airtight, moisture tight closure depending upon the contents contained within the bag 12. Although, leakage along the top seam junctures is a possibility, an absorbent material may be used for wiping up liquids or blood to convert the liquid substance(s) within the bag 12 to a gel or gelatinous state. Leakage may also occur when outside pressure is applied beyond the bag's containment capacity, to thereby burst the bag structure 12. A cut-resistant lining of Kevlar®, for example, enveloping the entire bag 12, as previously described herein, will reduce the likelihood of bursting.

[0019] Figure 9 shows a wire-lined or rigid closure structure 37 for the clean up bag 12 of this invention. This type of closure is shown to have a length of wire 38 coated with either plastic, paper or similar material 39 and which runs along the top 18 of one side of the bag 12. Two such coated wire segments are shown extending beyond the sides of the bag 12. After the bag 12 containing the added contents is rolled down two or three times, the bag 12 may be closed by turning the wires back over the front or back of the bag 12. If necessary, the wire may be folded back again to extend outwards, unrolled and re-opened. The bag 12 shown may be made with an absorbent cloth material and reused until the plastic lining of the bag 12 has lost its vitality as a protective moisture barrier. Another adaptation may be a paper bag that has a plastic coating or a plastic liner on its interior to serve as a moisture barrier in clean up situations, i.e. vomit bags or motion-sickness bags.

[0020] Figure 10 shows a sandwich bag type closure 40 used on the bag 12. The closure 40 comprises a fold and tuck type top closure for the clean up bag 12. Once the bag 12 has been used to pick up or wipe up a spill or to clean up a body part, the bag 12 is turned inside-out so that the mitt which was originally heat-sealed to the interior of the bag 12 is now visually apparent to be on the outside of the bag 12. The unpleasant or spilled substance is now contained within the bag 12. A flap 41 or extended piece of plastic bagging material remains on one side of the bag 12. On the opposing side of the bag 12 is a cuff or folded over piece of bagging material 45. For closure of the bag 12 in this closing method, the flap or extended piece 41 is now tucked inside the bag 12 and the "cuff" 45 is folded over the end of the bag 12. The bag contents are now folded inside the clean up bag 12 for easy disposal of contained liquid materials or substances. This type of closure is designed particularly for waste that is not toxic, infectious, contaminated or caustic to the skin. Even with an absorbent layer of moisture-activated gelatinous material or lining, for example, the possibility of bag leakage may still be present. The sandwich bag or fold and tuck top type closure 40, as shown, however, is adequate for many innocuous or harmless types of spills in the home, for example.

[0021] Figure 11 shows a bag having a loop and hook structure or Velcro® type closure 43 wherein cooperat-

ing strips of Velcro® 44 are mounted or affixed to the top 18 of the original interior and exterior sides, respectively, of the bag 12. When the bag 12 is subsequently turned inside-out, the top 18 of the bag 12 may be turned or rolled over once and fastened with the cooperating Velcro® type closure. The corners of the bag 12 are shown die-cut in such a way that a right angle is provided at each edge. The right angles provide added protection from leakage when the strip of Velcro® is fastened with the proper pressure-sensitive procedure at the time of closing. With the loop and hook or Velcro® type closure 43 and with proper and careful sealing, a leak-resistant closure is realized. However, as mentioned above, certain caveats always exist when using a bag 12 for infectious, toxic, or contaminated wastes.

[0022] Referring to Figure 12, an alternate bag structure is shown having opposing handles 47 and 48 extending from the top of bag 12 and which may be tied to close the bag 12 after use. Thus, after the bag 12 has been utilized, the opposing handles may be tied to contain the materials placed within the bag 12. The bag structure is preferably constructed of a flexible plastic structure.

[0023] Figure 13 shows a bio-wipe bag structure 51 wherein an additional high absorbent pad 53 is attached or fixed to the absorbing side of the bag 12. The thicker pad-like material 53 is similar to the thickness of an incontinence product, such as the product made by Kimberly-Clark (Depends®). The latter absorbent pad material 53 may be superimposed upon the thinner absorbent layer 54 as described in the above Figures. The purpose of this additional pad 53 is to provide greater ease in grasping the exterior pad from inside the bag 12 once the user's hand is inserted into the interior mitt. The additional pad 53 also provides for better facility in wiping up and absorbing greater spills, saline solution, large amounts of blood, various caustic substances, oil spills, and the like. The bio-wipe bag 51 wherein the additionally attached high absorbent pad 53 is used, for example, is designed for use in certain surgical procedures wherein the bag 12 may be turned inside out for subsequent disposal.

[0024] Figure 14 shows the method steps for using the bags described herein. As shown, the bag 12 is initially opened and the hand of the user is inserted. Next, the bag 12 is brought in proximity to the waste 13 to be removed or cleaned up. Next, with the waste material 13 firmly grasped, the bag 12 is turned inside out. Finally, the closure structure is readied for use and the bag 12 is closed for disposal. The method steps shown are generally the same for all of the closure structures shown and described herein.

[0025] Figures 15 and 16 show printing and associated symbols 55 and 57 that are preferably placed on a surface of each bag 12 of the present invention. The printing 55 and 57 include the internationally recognized symbols to designate the presence of infectious and hazardous waste materials. The printing 55 is generally

used in hospital and medical settings, while printing 57 is generally used in industrial settings.

[0026] Figures 17 and 18 show embodiments of the clean up device of the invention. Rather than using an interior glove member as shown and described above, heat sealed mitt areas are utilized. Figure 17 shows clean up device 45 having a top layer 63 and an absorbent pad 68 attached to the bottom layer 65 of the bag. However, inside the bag, an interior flexible layer 64 being coextensive with the bag layers, is shown sealed or joined to bag bottom layer 65 at seal lines 66 and 67 to form a mitt area within which the hand of a user may be placed. Seal lines 66 and 67 are converging seal lines which form the mitt area, which may have other forms. Figure 18 shows clean up device 46 having a top bag layer 57 and an absorbent pad 62 attached to the bottom of the bag layer 59. Further, an interior or top mitt layer 58 is shown bonded to bag layer 59 to form a diamond shaped mitt as defined by seal lines 60 and 61. The seal lines may be heat sealed areas, adhesive lines, or the like, depending upon the material used to form the mitt area. The mitt areas described may be utilized with closure structures in accordance with any of the previously-described examples.

[0027] Various further alternate embodiments of the present invention are possible, as mentioned above, and they include as follows:

- 1) The interior plastic bag and associated closures, such as the drawstring, may be colored in red to indicate toxic waste.
- 2) The entire "exterior" of the bag with toweling material, cut resistant fabric/material may be manufactured in white or blue colors to indicate use in a surgical/hospital/ medical environment. The interior plastic bag which subsequently becomes the exterior, enveloping closure on the interior contents when turned inside out, may be colored red, white, pastel blue, or transparent (depending on designated needs such as infectious wastes, regular safe disposal waste, etc.).
- 3) The paper toweling material may be substituted by cotton, linen, or a synthetic combination of fibers which has a high absorbency rate or similar quality.
- 4) The size of the clean-up device or bag may be expanded or enlarged for major surgical procedures where a great deal of fluids are generated due to loss of blood and irrigation procedures. The gauze insert may also be enlarged and thickened (comparable to the thickness of a diaper) for various types of major surgeries requiring clean up and greater absorbency needs. The inserted gauze may also be enlarged appropriately or proportionally to meet the needs of any greater absorbency required in most major surgeries. Regular sizes may include: 11"x12", 11"x14", 10"x16" and 12"x20".
- 5) The clean up device may also be used with medicated gauze for medical emergency situations in

emergency room and paramedic vehicles. Such a device may be used as a standard clean up device in trauma packs, operating room clean up kits, etc.

6) The bag of the invention may be used without the cut-resistant material in the case of using the pad 54 for special purpose hazardous waste clean up where sharp objects are not present, such as for scrubbing a hazardous waste and capturing the waste into the bag.

7) The bag may be used as an oil clean up bag for oil spill clean-ups on a garage floor or other contaminated surface. The pad 54 may be adapted to contain a solvent material to clean up the oil or the towel may also be adapted to absorb oil.

8) A tack bag having a substrate on the insert and the towel exterior for clean up. This bag structure may be used to remove sediment & dust from an automobile exterior or similar finish that must be dust-free before an application of a finish coat or sealant is applied.

9) A bag with a "silver cloth" used to polish silver and other metals to a clean and bright finish.

10) "Treated" material bags with ammonia, soap, detergents, various cleaning products, etc., pre-treated on the towel 52 or pad 54.

11) A sponge bag may be formed with a paper-thin sponge material on the outside for wiping spills off dining room tables and picking up garbage.

12) A Scotch Brite™ type bag may be formed by attaching Scotch Brite™ cleaning material on one side of bag for scouring.

13) A shoe shine bag may be formed similar to the type found in hotel rooms and having advertising printed on one side of the plastic, and the opposite side having a "buffing cloth material" for shoe polishing. The interior of the plastic lined bag may contain complimentary sample sized shoe polish, sewing kit, shampoos, soaps etc.

[0028] Of the various alternate embodiments outlined above, those that do not involve the cleaning up, in and around sharp objects may not require a cut-resistant layer in the bag design. In particular, items 7-13, listed above, would not normally require a bag construction with a cut-resistant material.

Claims

1. A clean up device (45; 46) to be worn on the hand of a user to clean up a spilled material, said clean up device comprising:

a flexible bag (63, 65; 57, 59) having a generally open top and an exterior surface, having opposing interior sides defining an interior recess adapted to receive the hand of the user; a pad attached to an exterior surface of said

bag

a glove member for receiving the hand of a user and joined to one interior side of said bag; a closure mechanism located on the top of the bag for closing said generally open top of said flexible bag after the hand of the user has been removed from said interior recess and said flexible bag has been inverted;

characterised in that the glove member comprises a single sheet member (64; 58) joined to said one of the interior sides of the bag along sealing lines (66, 67; 60, 61) an interior side of the bag and the single sheet member forming a mitt area for receiving said user's hand.

2. A device (45) according to claim 1, wherein there are two sealing lines (66, 67).

3. A device according to claim 1 or 2, wherein the sealing lines (66, 67) converge as they approach the bottom of the bag (63, 65).

4. A device (46) according to claim 1, wherein the sealing lines (60, 61) define a diamond shape.

5. The clean up device according to any of the claims 1-4, wherein said closure mechanism comprises an adhesive closure structure (25) in which an adhesive strip (26) is disposed adjacent said top of said bag and aligned so as to seal said bag as said top of said bag is folded or rolled over upon itself.

6. The clean up device of any of claims 1 to 4, wherein said closure mechanism comprises a co-operating channel and ridge closure structure (28), closure of the bag being obtained by sealing the opposite sides of the closure structure when pressure is applied by the user.

7. The clean up device of any of claims 1 to 4, wherein said closure mechanism (37) comprises at least one bendable rigid member (38) connected to said bag generally proximate to said top of said bag such that said top of said bag may be rolled or folded over upon itself.

8. The clean up device of any of claims 1 to 4, wherein said closure mechanism comprises a cuff (45) extending from and connected to said bag folded over said top of said bag to form a closure such that said cuff forms a recess into which said top of said bag is received when said top of said bag is initially rolled or folded over.

9. The clean up device of any of claims 1 to 4 wherein said closure mechanism comprises a hook-and-loop closure structure (43) disposed adjacent said

top of said bag and positioned so as to move into mating engagement to seal said bag as said top of said bag is folded or rolled over upon itself.

10. The clean up device of any of claims 1 to 4, wherein said closure mechanism comprises a closure structure wherein said closing means is comprised of opposing handle members (47, 48) constructed and arranged for tying to close said bag.

Patentansprüche

1. Reinigungsvorrichtung (45; 46), die an der Hand eines Benutzers zu tragen ist, um ein verschüttetes Material aufzuwischen, wobei die Reinigungsvorrichtung folgendes umfaßt:

eine flexible Tasche (63, 65; 57, 59), die ein im wesentlichen offenes Oberteil und eine äußere Oberfläche aufweist und einander gegenüberliegende Innenseiten aufweist, welche eine innere Aufnahme begrenzen, die dazu ausgebildet ist, die Hand des Benutzers aufzunehmen;

eine Auflage, die an einer äußeren Oberfläche der Tasche angebracht ist;

ein Handschuhenelement zum Aufnehmen der Hand eines Benutzers, das mit einer der Innenseiten der Tasche verbunden ist;

einen Verschußmechanismus, der an dem Oberteil der Tasche angeordnet ist, zum Verschießen des im wesentlichen offenen Oberteils der flexiblen Tasche, nachdem die Hand des Benutzers aus der inneren Aufnahme entnommen worden ist und die flexible Tasche umgestülpt worden ist;

dadurch gekennzeichnet, daß das Handschuhenelement ein Einzellagenelement (64; 58) umfaßt, das mit der einen der Innenseiten der Tasche längs Abdichtlinien (66, 67; 60, 61) verbunden ist, wobei eine Innenseite der Tasche und das Einzellagenelement einen Handschuhbereich zum Aufnehmen der Hand des Benutzers bilden.

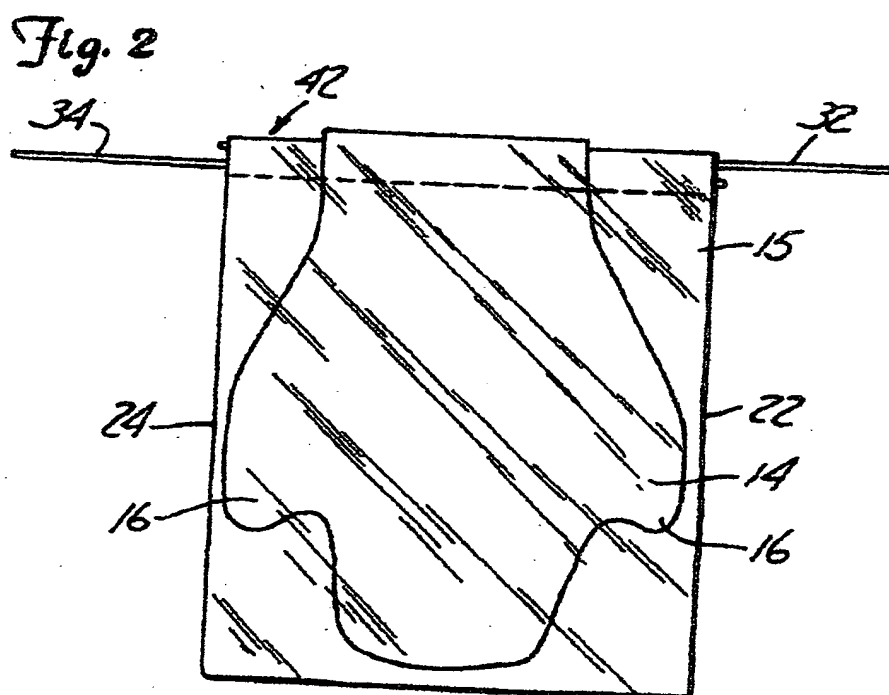
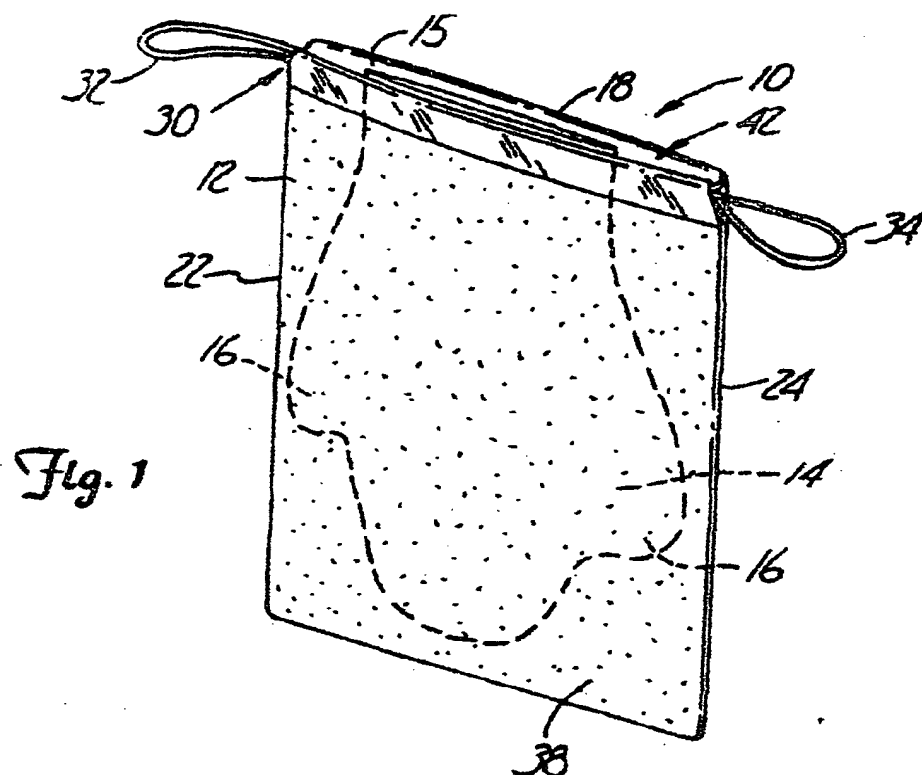
2. Vorrichtung (45) nach Anspruch 1, wobei zwei Abdichtlinien (66, 67) vorhanden sind.
3. Vorrichtung nach einem der Ansprüche 1 oder 2, wobei die Abdichtlinien (66, 67) konvergieren, während sie sich dem Unterteil der Tasche (63, 65) nähern.
4. Vorrichtung (46) nach Anspruch 1, wobei die Abdichtlinien (60, 61) eine reutenförmige Gestalt be-

grenzen.

5. Die Reinigungsvorrichtung nach einem der Ansprüche 1 bis 4, wobei der Verschußmechanismus einen Adhäsionsverschlußaufbau (25) umfaßt, bei dem ein Adhäsionsstreifen (26) dem Oberteil der Tasche benachbart angeordnet und so ausgerichtet ist, daß er die Tasche abdichtet, wenn das Oberteil der Tasche auf sich selbst umgefaltet oder umgerollt wird.
6. Die Reinigungsvorrichtung nach einem der Ansprüche 1 bis 4, wobei der Verschußmechanismus einen Verschlußaufbau (28) mit einem Kanal und einem Wulst, die miteinander zusammenwirken, umfaßt, wobei ein Verschluß der Tasche dadurch erreicht wird, daß die einander gegenüberliegenden Seiten des Verschlußaufbaus abgedichtet werden, wenn Druck durch den Benutzer angewandt wird.
7. Die Reinigungsvorrichtung nach einem der Ansprüche 1 bis 4, wobei der Verschußmechanismus (37) mindestens ein biegbares steifes Element (38) umfaßt, das mit der Tasche im wesentlichen nahe des Oberteils der Tasche so verbunden ist, daß das Oberteil der Tasche auf sich selbst umgerollt oder umgefaltet werden kann.
8. Die Reinigungsvorrichtung nach einem der Ansprüche 1 bis 4, wobei der Verschußmechanismus eine Manschette (45) umfaßt, die sich von der Tasche erstreckt und mit der Tasche verbunden ist, welche über das Oberteil der Tasche gefaltet ist, um einen Verschluß zu bilden, derart, daß die Manschette eine Aufnahme bildet, in die das Oberteil der Tasche aufgenommen wird, wenn das Oberteil der Tasche anfänglich umgerollt oder umgefaltet wird.
9. Die Reinigungsvorrichtung nach einem der Ansprüche 1 bis 4, wobei der Verschußmechanismus einen Klettverschlußaufbau (43) umfaßt, der dem Oberteil der Tasche benachbart angeordnet und so positioniert ist, daß er in paarenden Eingriff kommt, um die Tasche abzudichten, wenn das Oberteil der Tasche auf sich selbst umgefaltet oder umgerollt wird.
10. Die Reinigungsvorrichtung nach einem der Ansprüche 1 bis 4, wobei der Verschußmechanismus einen Verschlußaufbau umfaßt, wobei das Verschlußmittel einander gegenüberliegende Griffelemente (47, 48) umfaßt, die für das Zubinden zum Verschießen der Tasche ausgestaltet und angeordnet sind.

Revendications

1. Dispositif de nettoyage (45 ; 46) destiné à être enfilé sur la main de l'utilisateur pour nettoyer un produit répandu, ledit dispositif de nettoyage comprenant :
 - un sac souple (63, 65 ; 57, 59) comportant une extrémité supérieure ouverte et une surface extérieure, des faces intérieures en regard définissant un logement intérieur agencé pour recevoir la main de l'utilisateur ;
 - un tampon fixé sur la surface extérieure dudit sac ;
 - un élément formant gant pour recevoir la main d'un utilisateur, lié à une face interne dudit sac ;
 - un dispositif de fermeture disposé à l'extrémité supérieure du sac pour fermer ladite extrémité généralement ouverte dudit sac souple une fois que la main de l'utilisateur a été retirée dudit logement intérieure et que ledit sac souple a été retourné ;caractérisé en ce que l'élément formant gant comprend un élément en feuille unique (64 ; 58) lié à ladite face interne du sac le long de lignes de scellement (66, 67 ; 60, 61), une face interne du sac et l'élément en feuille unique constituant une zone formant moufle pour recevoir la main dudit utilisateur.
2. Dispositif (45) suivant la revendication 1, dans lequel sont prévues deux lignes de scellement (66, 67).
3. Dispositif suivant la revendication 1 ou 2, dans lequel les lignes de scellement (66, 67) convergent au fur et à mesure qu'elles se rapprochent du fond du sac (63, 65).
4. Dispositif (46) suivant la revendication 1, dans lequel les lignes de scellement (60, 61) définissent une forme de losange.
5. Dispositif de nettoyage selon l'une quelconque des revendications 1 à 4, dans lequel ledit dispositif de fermeture comprend une structure de fermeture adhésive (25) dans laquelle une bande adhésive (26) est disposée adjacente à ladite extrémité supérieure dudit sac et alignée de façon à rendre étanche ledit sac lorsque ladite extrémité supérieure dudit sac est repliée ou roulée sur elle-même.
6. Dispositif de nettoyage selon l'une quelconque des revendications 1 à 4, dans lequel ledit dispositif de fermeture comprend une structure de fermeture (28) à nervure et gorge coopérantes, la fermeture du sac étant obtenue en solidarifiant les faces en regard de la structure de fermeture lorsqu'une pression est appliquée par l'utilisateur.
7. Dispositif de nettoyage selon l'une quelconque des revendications 1 à 4, dans lequel ledit dispositif de fermeture (37) comprend au moins un élément rigide (38) pouvant être plié, relié audit sac d'une manière générale au voisinage de ladite extrémité supérieure dudit sac en sorte que ladite extrémité supérieure dudit sac puisse être roulée ou repliée sur elle-même.
8. Dispositif de nettoyage selon l'une quelconque des revendications 1 à 4, dans lequel ledit dispositif de fermeture comprend un rabat (45) s'étendant à partir dudit sac et relié à ce dernier, replié sur ladite extrémité supérieure dudit sac pour constituer une fermeture telle que ledit rabat forme un logement dans lequel ladite extrémité supérieure dudit sac est reçue lorsque ladite extrémité supérieure dudit sac est initialement roulée ou repliée.
9. Dispositif de nettoyage selon l'une quelconque des revendications 1 à 4, dans lequel ledit dispositif de fermeture comprend une structure de fermeture à boucles et crochets (43), disposée adjacente à ladite extrémité supérieure dudit sac et positionnée de façon à venir en engagement mutuel pour fermer de manière étanche ledit sac lorsque ladite extrémité supérieure dudit sac est roulée ou repliée sur elle-même.
10. Dispositif de nettoyage selon l'une quelconque des revendications 1 à 4, dans lequel ledit dispositif de fermeture comprend une structure de fermeture dans laquelle lesdits moyens de fermeture comportent des éléments formant poignées en regard (47, 48) constitués et agencés pour fermer par filage ledit sac.



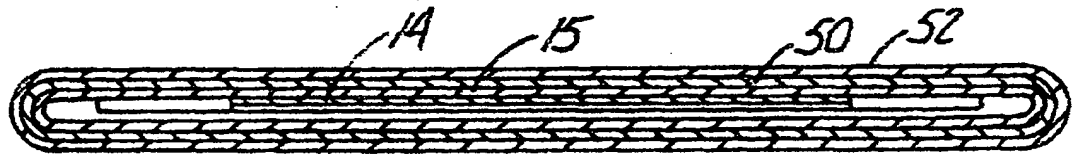


Fig. 3

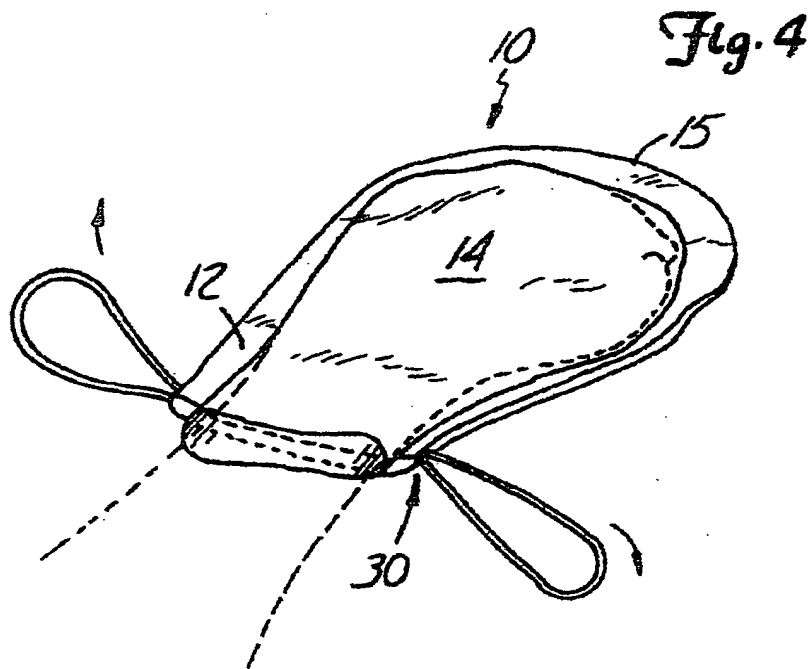


Fig. 4

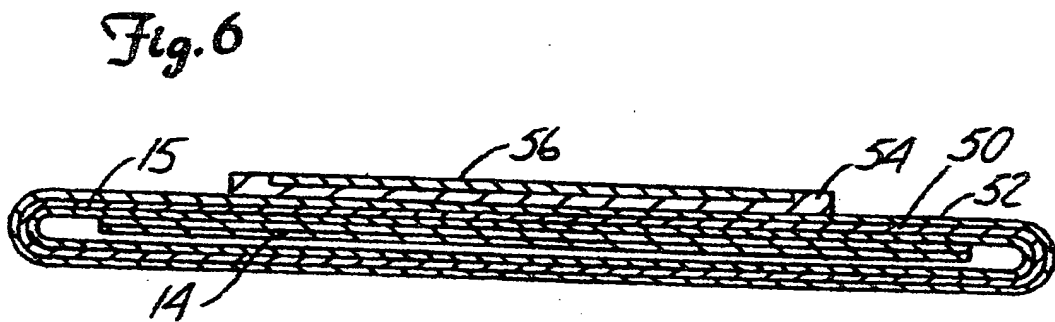
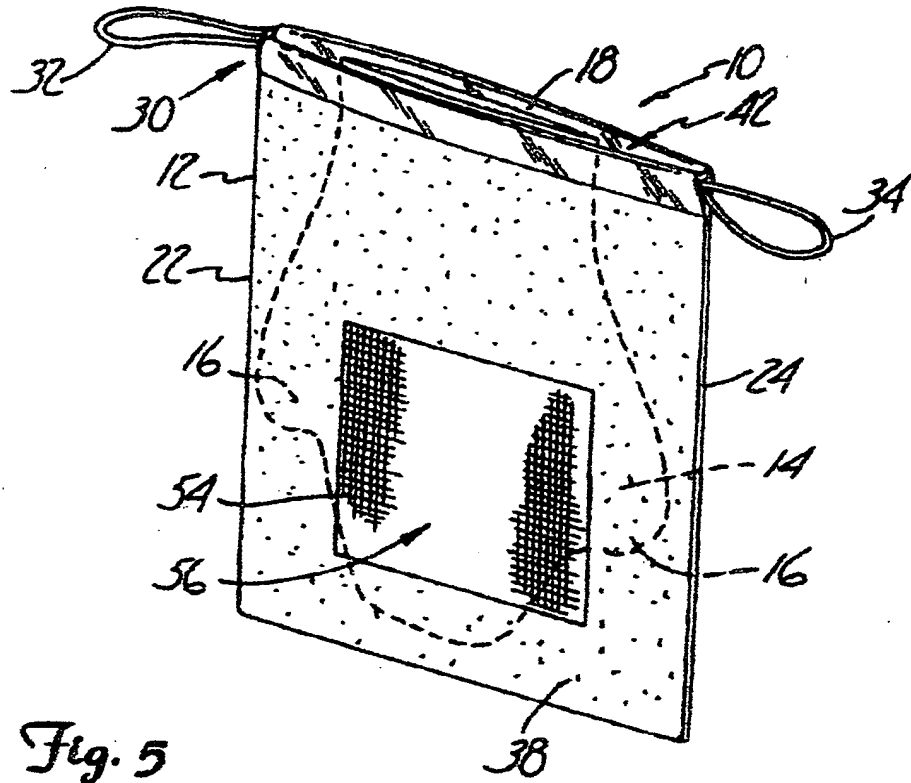


Fig. 7

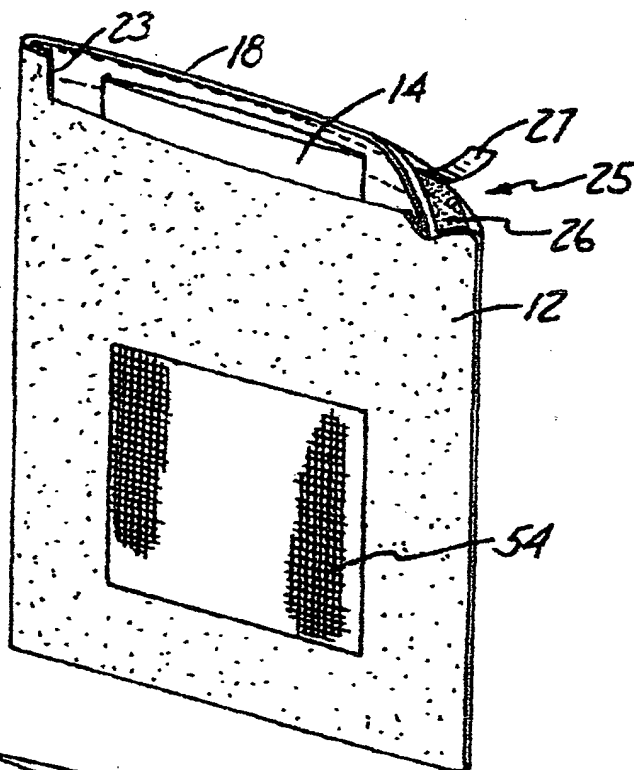
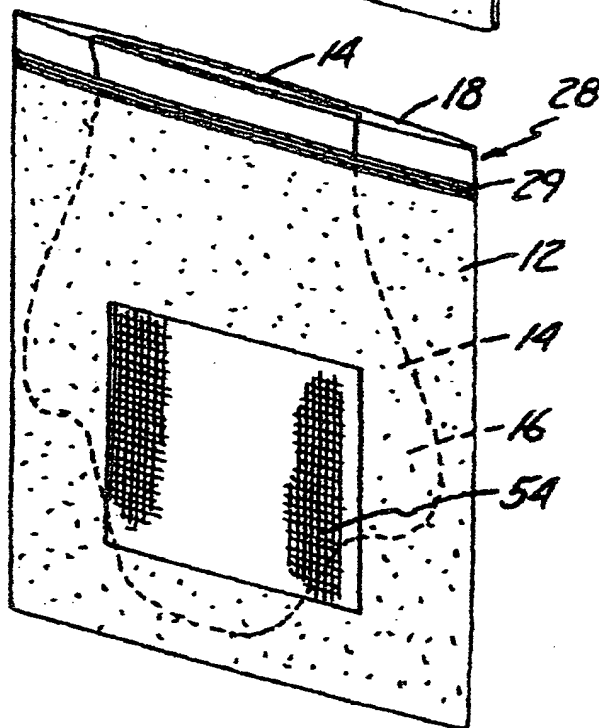
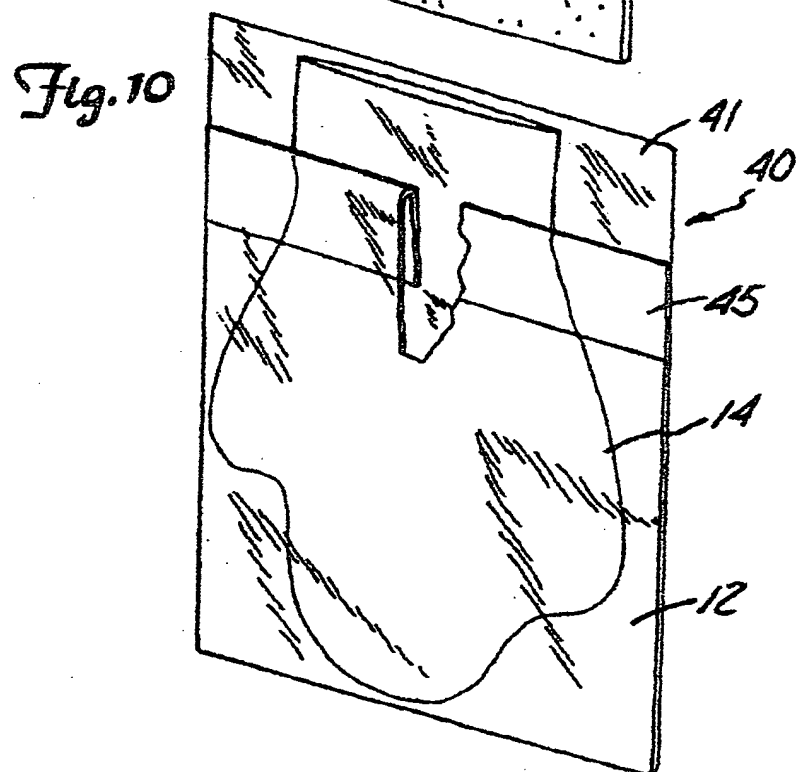
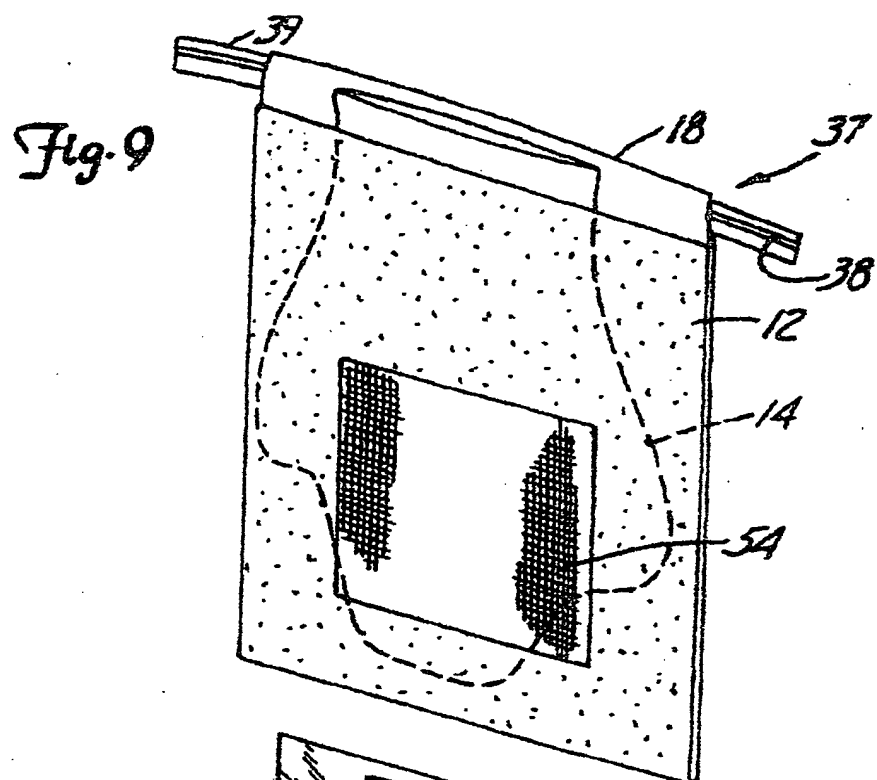
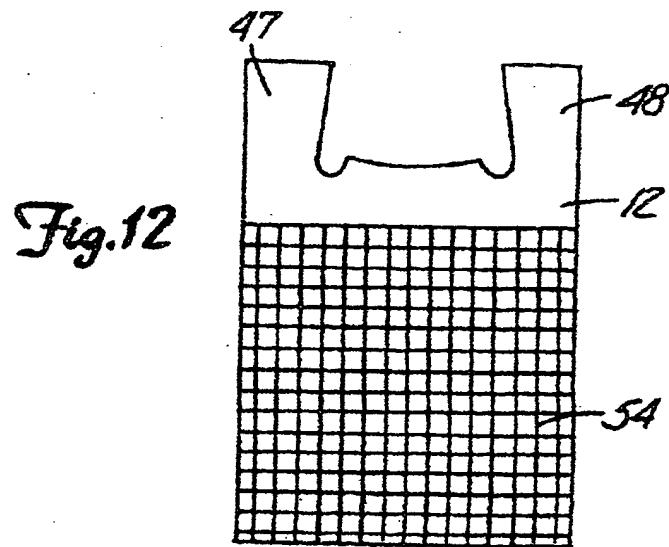
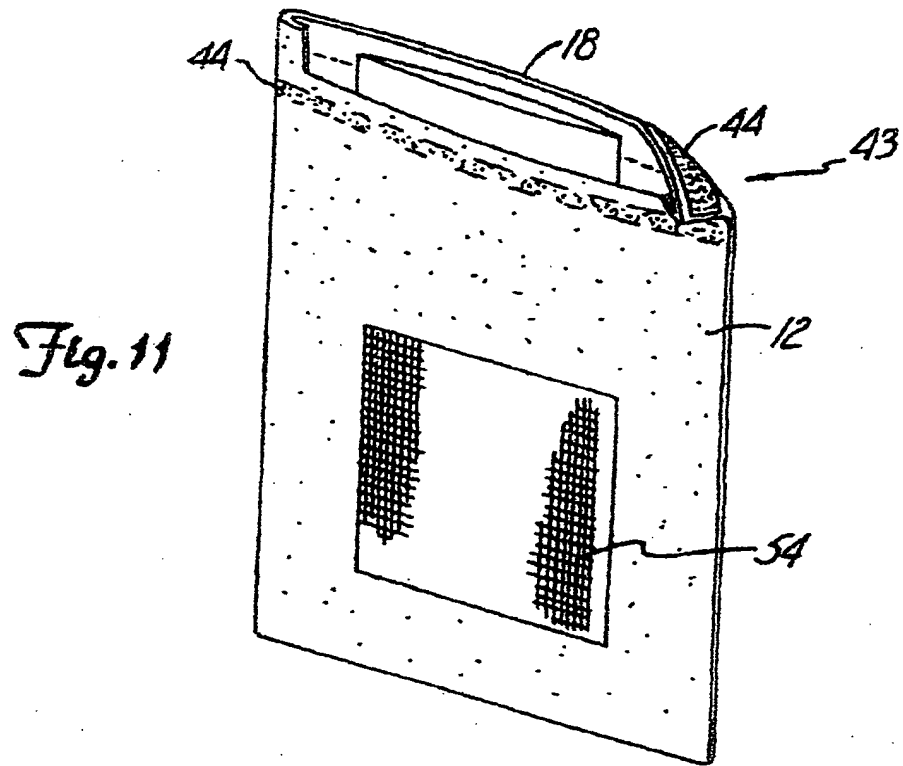
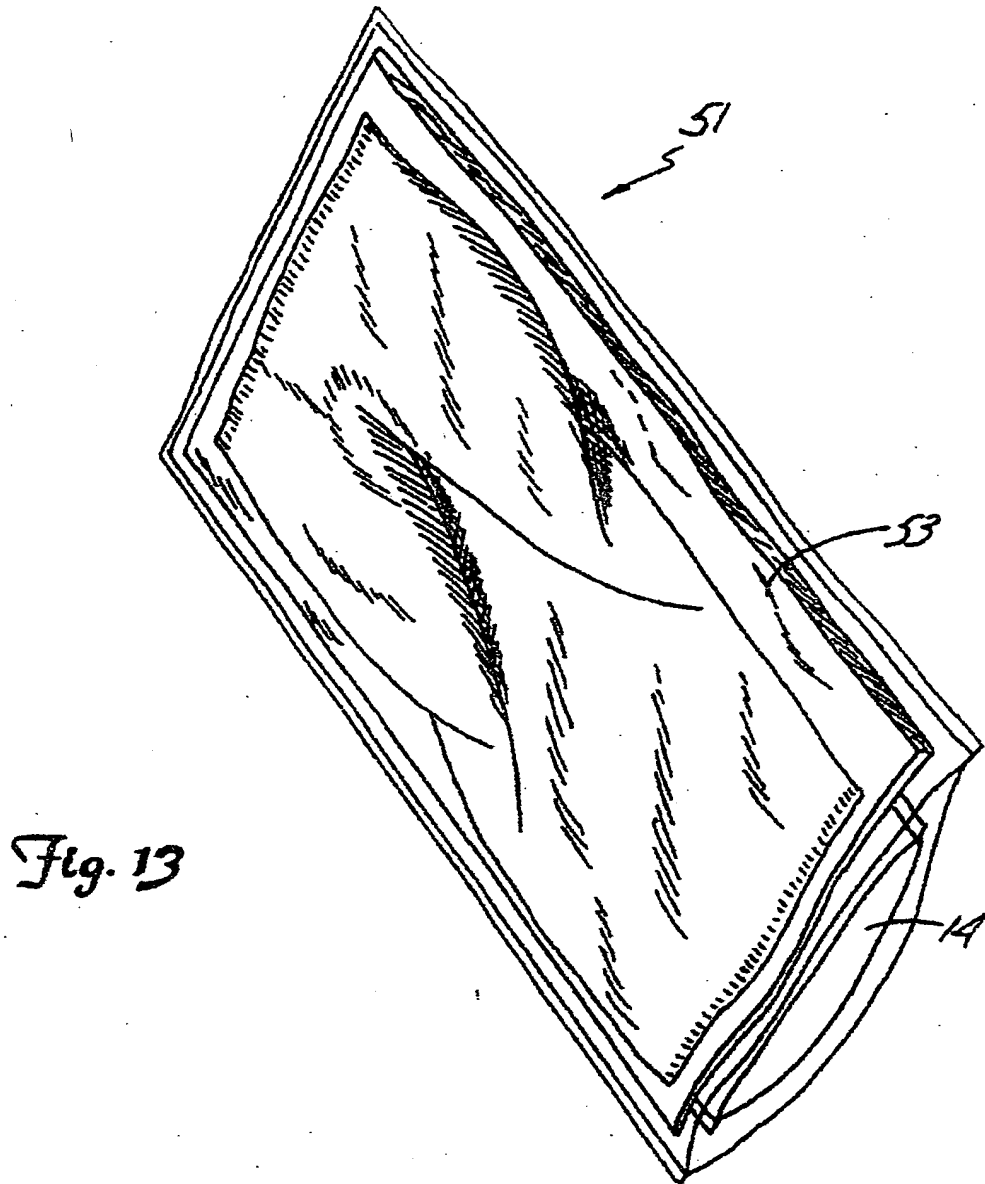


Fig. 8









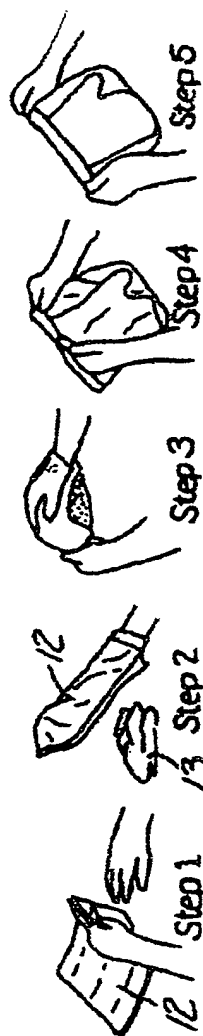


Fig. 14

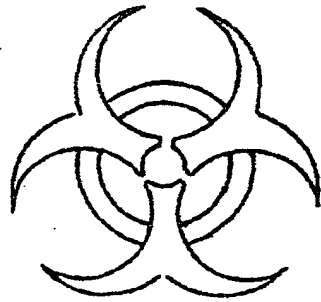
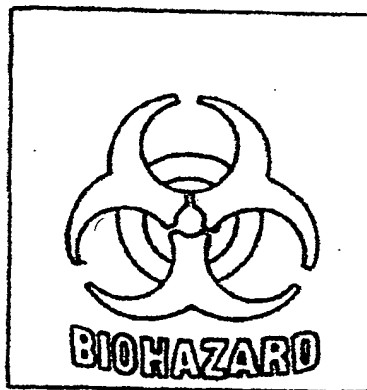


Fig. 15

55

INFECTIOUS
WASTE



57

Fig. 16

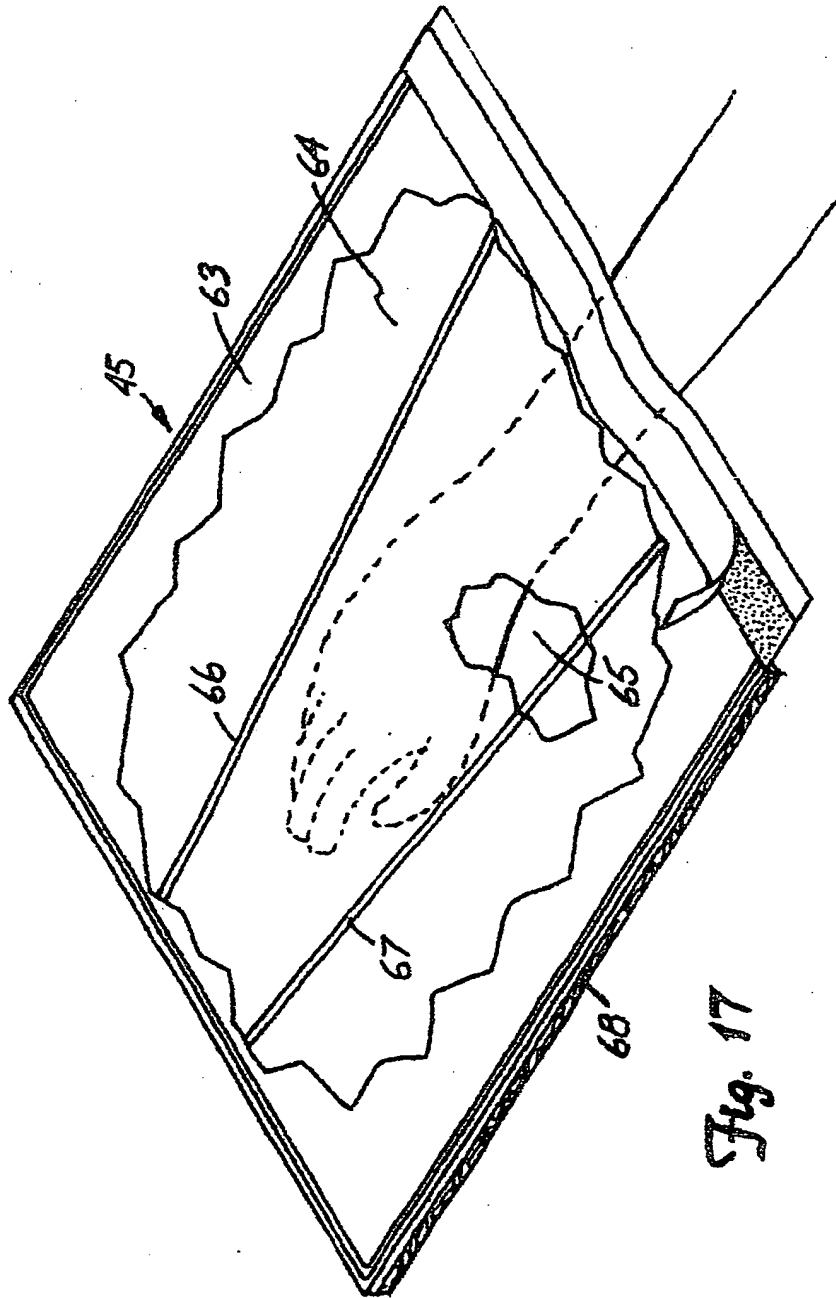


Fig. 17